WHAT IS CLAIMED IS:

1. An antenna diversity communications device for communicating by frequency hopping among a plurality of channels, comprising:

at least two antennas;

means for determining a pre-detection diversity of signals from said at least two antennas; and

means for switching signals from said at least two the antennas based on frequency correlation between a current channel and a next channel.

2. An antenna diversity communications device according to claim 1 wherein said frequency correlation is related to a magnitude of a frequency difference between said current channel and said next channel.

3. An antenna diversity communications device comprising:

at least first and second antennas;

a switching means for alternatively selecting a received signal from one of said at least first and second antennas;

a reception information measuring means for measuring received information that indicates a receiving condition of the one of said at least first and second antenna currently selected by said switching means;

a memory means for storing frequency difference information between a current channel and a next channel;

a switching control means for controlling said switching means;

said switching control means being responsive to said frequency difference information and said signal information to order said switching means to connect to a different one of said at least first and second antennas when hopping to a next channel if a high frequency correlation exists between said current channel and said

next channel and a current receiving condition is poor.

4. An antenna diversity communications device according to claim 3, wherein:

said frequency difference information is a frequency range between a frequency of said current channel and a frequency of said next channel; and

said signal information is received intensity of a corresponding antenna.

5. An antenna diversity communications device according to claim 4, further comprising:

a threshold memory means for storing a first threshold value for determining a level of frequency correlation and a second threshold value for determining a quality of receiving condition;

means for comparing a frequency difference between said current channel and said next channel with said first threshold value; and

means for comparing said signal information with the second threshold value.

6. An antenna diversity communications device according to claim 5, further comprising:

an input means for receiving environment information of a surrounding space where communications are conducted; and

said switching control means includes means for updating said first threshold value based on received environment information.

7. An antenna diversity communications device according to claim 6, further comprising:

said environment information includes means for discriminating between at least two types of spaces.

8. An antenna diversity communications device according to claim 7,

wherein said at least two spaces include at least spaces typified by at least two of houses, offices and outdoors.

9. An antenna diversity communications device according to claim 8, wherein:

said first threshold is about 10 MHz when said environment information indicates a house environment;

said first threshold is about 1 MHz when said environment information indicates an office environment; and

said first threshold is in the order of 200 kHz when said environment information indicates an outdoor environment.

10. An antenna diversity communications device according to claim 7, wherein said first threshold is a threshold giving predetermined values of correlation in said at least first and second spaces.

11. An antenna diversity communications device according to claim 3, wherein:

said switching control means omits ordering said switching means to switch to another antenna when hopping to a next channel if a high frequency correlation exists between said current channel and said next channel and a current receiving condition is good.

12. An antenna diversity communications device for communicating by means of frequency hopping, said communications device comprising:

at least first and second communications paths;

a first antenna on said first communications path;

a second antenna on said second communications path;

a switching means for alternatively selecting one said first and second communications paths from said at least first and second communications paths;

a reception information measuring means for measuring signal information that indicates a receiving condition of a path selected by said switching means;

a memory means for storing signal information measured by said reception information measuring means; and

means for selecting a one of said at least first and second communications paths based on said signal information stored in said memory means.

13. An antenna diversity communications device according to claim 12, wherein said signal information stored in said memory means includes at least one combination of a value showing received intensity, a value showing quality of receiving conditions, and a receiving error detection result.

14. An antenna diversity communications device according to claim 12, wherein said memory means includes means for storing measured information for all hopping frequencies.

15. An antenna diversity communications device according to claim 14, wherein said switching means includes means for switching between said at least first and second communications paths when said hopping frequency is switched based on said signal information of said next channel stored in said memory means.

16. An antenna diversity communications device according to claim 14, wherein said signal information of corresponding hopping frequency of said memory means is updated each time said hopping frequency is switched.

17. An antenna diversity communications device according to claim 16, wherein said signal information of said memory means is updated altogether in a range where high correlations between said corresponding hopping frequencies exist.

18. An antenna diversity communications device according to claim 17, including means for permitting adjustment of a range where said signal information

of said memory means is updated altogether.

19. An antenna diversity communications device according to claim 12, wherein said memory means includes means for storing said measured signal information not for all hopping frequencies but for each divided band formed by dividing the spectrum spread band.

20. An antenna diversity communications device according to claim 19, wherein said switching means includes means for switching between said at least first and second communications paths when switching said hopping frequency based on said signal information to be stored in said memory means concerning said band where said next channel belongs.

21. An antenna diversity communications device according to claim 19, wherein said signal information of said corresponding band of said memory means is updated each time when said hopping frequency is switched.

22. An antenna diversity communications device according to claim 19, wherein:

said memory means stores only signal information of the single communications path selected by said switching means; and

said switching means includes means for switching said communications path to another communications path if said signal information of said communications path is smaller than said prescribed value.

23. An antenna diversity communications device according to claim 12, wherein:

said memory means stores all of said signal information for said at least first and second communications paths; and

said switching means further includes means for switching to a one of said at least first and second communications paths that provides the best

communications condition.

24. An antenna diversity communications device according to claim 12, further comprising means for selecting a one of said at least first and second communications paths with a uniform probability in an initial condition.

25. An antenna diversity communications device according to claim 12, further comprising means for returning said memory means returns to the initial condition if no communications are conducted for a prescribed time.

26. An antenna diversity communications device according to claim 12, wherein said signal information is the received intensity of the antenna in the corresponding signal path.

27. An antenna diversity communications device according to claim 12 wherein transmission is carried out using said antenna of the switched communications path.

28. An antenna diversity communications device according to claim 12, including means for updating said signal information concerning said transmission channel of said memory means using ACK/NCK information in a response to the transmission.